UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/464,784	12/17/1999	MICHAEL B. FREEMAN	COS99034	8064

25537   7590   03/19/2002

WORLDCOM, INC.
TECHNOLOGY LAW DEPARTMENT
1133 19TH STREET NW
WASHINGTON, DC 20036

EXAMINER
CHOW, CHARLES CHIANG

ART UNIT	PAPER NUMBER
2684	

DATE MAILED: 03/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

Office Action Summary

	Application No.	Applicant(s)
	09/464,784	Freeman et al.
	Examiner	Art Unit
	Charles Chow	2684

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ___3___ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Jan 7, 2002*

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-27* is/are pending in the application.

    4a) Of the above, claim(s) _____ is/are withdrawn from consideratio

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-27* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

    a) ☐ All b) ☐ Some* c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    *See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other:

U. S. Patent and Trademark Office

PTO-326 (Rev. 9-00)   Office Action Summary   Part of Paper No. 10

Office Action for
Applicant's Amendment
(January/7/2002)

1. Regarding applicant's amendment, new prior art from Brouckman et al. is included the

following office action, for the subject matter of managing the call billing records; the

gateway interfacing, the signaling network, the format conversion, and the transmitting

second format to data network.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness
rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

2. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brouckman et al.

(US 6,134,307).

Brouckman et al. discloses **claim 1**, an apparatus (network 100) for managing call records

(abstract, front figure) in the signaling network (Fig. 3, gateway 110, the MSC 310) to carry

and convert user call events (abstract, col. 1, summary of the invention). The gateway (110)

interfaces with the signaling network (MSC 310, PSTN 31) with the internet service provider

as shown in col. 7, line 56-col. 8, line 2, the SPnet 524 is a personal computer for internet,

Web services.

Brouckman et al. discloses the operative to collect billing data from signaling network in the

first data structure format (from plurality of sources, col. 10, line 52-53); and a network

processor operative to receive the call billing record (front figure, the BSS 430 receives

CDRs from gateway 110; the CRD is created in the gateway in the network processor

element and extracted by the operations maintenance controller gateway 502, col. 4, line 35-

42).

Brouckman et al. discloses the receiving the collected call billing data (collection process,

col. 4, line 35) in the first format (receiving plurality of call events fro plurality of source in

the global network, col. 10, line 53-54) for the gateway (col. 4, line 38), and convert the

collected call billing data from the first data structure format to a second data structure

format (data structure format of the second destination, col. 10, line 55 to col. 11, line 10)

In view of Brouckman et al.'s second format for sending different entities around the world

after the call record conversion (abstract, claim 1) , it is obviously apparent to one of ordinary

skill in the art at the time of invention that the transmitting the converted CDR to destination

in the world would include the transmit call billing data in the second format to another data

network destination in the world.

Regarding **claim 2,** Brouckman et al. discloses the signaling gateway 110 in Fig. 3, which

comprising the signaling elements mobile switching center MSC 310, the gateway

management system GMS for providing the administration and maintenance support for each

of the gateway subsystem (column 3, line 29-35).

Regarding **claim 3,** Brouckman et al. discloses the coupling to the gateway in his interface to

gateway 110, utilizing the Gateway Business system 420 to service provider system 410, and

interfacing to message origination center, and switch 310, of the gateway 110 (figure in the

front figure).

Regarding **claim 4**, Brouckman et al. discloses in the front figure that the Business Support

system 430 polling the call detail records CDR from gateway 110 (front figure), and the

gateway generate the CDR (col. 4, line 38-40), for operative to poll.

3. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brouckman et al.

in view of Witzman et al. (US 5,737,399).

In the above it does not include the raw data of the call event records (CERs).

Witzman et al. teach **claim 5**, the first data structure format comprises raw ASG call event

records (CERs). See in abstract, Fig. 2A, it shows a network's system architecture having the

centralizing storage and verification element. In column 1, line 18-21, in column 3, line 4-12,

in column 4,line 63 to column 5, line 4, it shows the captured billing records comprises the

call event record (CER).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of

invention to modify and add Witzman et al.'s raw ASG to Brouckman et al., such the first

format could be easily converted to the other secondary structured formats.

4. Claims 6, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brouckman et al.

in view of Doherty et al. (US 5,333,184).

In the above, it does not include the AMA format.

Doherty et al. teaches **claim 6**, a data network and transmit the second data structure format

to the data network for billing processing. See in abstract, in Fig. 1, it shows the system

utilizes the exchange message interface message format, EMI, carrying the primary

interexchange carrier indicator for call billing purpose associated with the subscriber. In

column 7, line 52-61, column 8, line 5-15, column 9, line 22-31, it shows the system

generates the AMA message format for the call, converts said AMA format to the EMI

message format, and transmits the EMI message record format to the call rating system.

Therefore, it would have been obvious   to one of ordinary skill in the art at the time of

invention to modify and add Doherty et al.'s transmitting in the EMI second format to the call

rating system, to Brouckman et al. as modified above, such that system could be upgraded

and more flexible of handling a second billing data format.

Regarding **claim 7**, the disclosure above in claims 1-4 has shown the claimed features for the

data network communicating with the network processor and the receiving of the second data

AMA format, although Broukman et al. discloses the conversion to plurality of CDRs ro the

format utilized by the destination.

5. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brouckman et

al. in view of Kay et al. (US 5,575,894).

In the above, it does not include the local traffic system.

Kay et al. teach **claim 8**, "...data network comprises a local traffic system (LTS)". See in

abstract, Fig. 1-3, and in column 3,line 3-25, it shows a virtual foreign exchange service

system having at least one interoffice trunk carries communication traffic between the local

exchange central office switched system and the foreign exchange central office switching system for billing purpose having the selective procedures.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Kay et al.'s local exchange central office of the local call traffic to Brouckman et al., such that the local billing data could be easily collected by the local exchange central office. Regarding the second data structure format , AMA format. Refer to the above disclosure discussion in claims, 1-4.

Regarding **claim 9**, Brouckman et al. discloses the network platform in col. 7, line 60-64, the Service provider net system 524 is a personal computer with software to access Web, Internet, for the processor network platform.

Regarding **claim 10**, the claimed features are covered by the disclosed patents shown above in claims 1-4. Therefore, it is rejected for the same rationale, for the interfacing the signaling network (Fig. 3), the internet service provider.

6. Claims 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brouckman et al., and further in view of Herbert (US 5,333,183).

In the above, it does not explicitly indicate the periodically receiving of the billing data.

Herbert teaches **claim 11**, "data network is operative to periodically receive the collected call billing data in the second data format". See in column 11, line 67 to column 12, line 47, and in column 28, line 22-31, it shows processor is periodically checks the statistics of the call message-detail-record MDR data records for billing purpose. Regarding "data network", refer to the disclosure in claim 1 above.

Herbert teaches **claim 13**, "...network processor polls the gateway at preset interval". See in column 28, line 22-31, and in table 1, it shows the schedules for periodically running the processes to invoke the administrative processor interface APIF for collecting the message processing. Also, see claim 16, 35, as taught by Herbert. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Herbert's scheduled periodically polling of the APIF for collecting call records, to Brouckman et al. such the billing collection could update the records according to the different time of the days. The operative to poll has shown above.

In the above, it does not include the AMA code 625 format.

Herbert teaches **claim 15**, "data network comprises a local traffic system (LTS), and wherein the received call billing data in the second data structure format comprises an industry standard automatic message accounting (AMA) structure code 625 format that is used to implement billing processing". In the above, it has shown the local exchange central office. Regarding the AMA code 652, See in Table 7, it shows the structured AMA code 625 format is utilized in the MDR data record system.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Herbert's AMA code 625 format to Brouckman et al., such that the second structure format could be specified as the AMA code 625 format.

Regarding **claim 12**, the claimed features are covered by the disclosed patents shown above in claim 4. Therefore, it is rejected for the same rationale, for the operative to poll.

Regarding **claim 14**, the claimed features are covered by the disclosed patents shown above in claim 11. Therefore, it is rejected for the same rationale. Regarding **claim 16**, the claimed features are covered by the disclosed patents shown above in claim 3. Therefore, it is rejected for the same rationale.

7. Claims 17-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brouckman et al. (US 6,134,307).in view of Liu et al. (US 5,898,780), and further in view of Wang (US 5,991,746).

In the above, it does not include the first and second computers.

Liu et al. teach **claim 17**, the providing a first computer device, a second computer device, and a communication link, the first computer device communicating with the network and the second computer device communicating with the first computer device via the communication. See in Fig. 1, in abstract, in column 2, line 38-65, sever software computer 42 of the billing module system 38 is in communication with the server computer 14 and remote computer 26 for collecting billing records. In column 1, line 9-25, it shows the Internet Service Provider ISP. Liu et al. teach "collecting call billing data with the first computer device in a first data structure format". See in Fig. 1, and Fig. 3, it shows the local network ISP 63 having billing system 38, and ISP 64 having the billing system 69 are collecting call billing data. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Liu et al.'s billing system module with computer server for local ISP to Brouckman et al. as modified above, such that the billing system could collect and process the billing records from the internet.

In the above, it does not include the data communications (comm) protocol.

Wang teaches the transferring the call billing data using a data comm protocol... computer device. See in abstract, it shows the data transferring protocol, TFTP protocol, is utilized for the billing data collector. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Wang's TFTP data transferring comm protocol to Brouckman et al. as modified above, such that the transferring of the billing data could be according to the protocol specified in the TFTP data comm protocol.

Regarding the converting the call billing data with the second computer device from the first data structure to a second data structure format, Brouckman et al. discloses the conversion of plurality of call event records for destination in the world, and the oprative ot carry user calls, the first computer device interfacing the signaling network and internet service.

Regarding **claims 18,19, 23**, the claimed features are covered by the disclosed patents shown in claim 17 above. Therefore, it is rejected for the same rationale.

Regarding **claims 20, 21, 22,** the claimed features are covered by the disclosed patents shown in claims 1, 3 above which also provides the disclosed features for claims 20-22, for the transferring billing data with transfer protocol, TCP, the over the world communication link, the gateway interfacing and internet service provider.

8. Claims 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brouckman et al. (US 6,134,307) in view of Jaiswal et al. (US 6,002,754).

In the above, it does not include the invoice.

Jaiswal et al. teach **claim 24**, the generating an invoice format for data network for delivery

to individual users. See in column 4, line 40-54, it shows the format processor sends billing

data, invoice, to customer supplied billing system 60. Therefore, it would have been obvious

to one of ordinary skill in the art at the time of invention to modify and add Jaiswal et al.'s

billing data invoice to Brouckman et al., such that the user could directly receive the billing

invoice information.

Regarding **claim 25**, the claimed features are covered by the disclosed patents shown in

claim 3 above. Regarding **claim 26**, the claimed features are covered by the disclosed patents

shown in claims 1, 3, 4 above for the transferring the call billing data.

9. Claims 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brouckman et

al. in view of Witzman et al. (US 5,737,399).

In the above, it does not include the generating of the alarm signal.

Witzman et al. teach **claim 27**, the generating an alarm signal with the network processor.

See in column 2, line 31-55, in column 3, line 13-19, in column 12, line 47-6, it shows the

alarm signal is generated according to the collected data from NIC and the corresponding

data stored in the network database. Also, Herbert shows the alarm display and alarm report

in Fig 19. Therefore, it would have been obvious to one of ordinary skill in the art at the time

of invention to modify and add Witzman et al.'s alarm generating of the network information

concentrator (NIC) to Brouckman et al., such that the errors in the billing data collection

system could be detected from displayed the alarms.

Response to Arguments and

Conclusion

10. Applicant's arguments with respect to claims 1-27 have been considered but are moot in view

of the new ground(s) of rejection.

Regarding applicant's arguments for the signaling network (in Brouckman's Fig. 3); user

calls and internet are disclosed from Brouckman et al. as shown above. The gateway 110

creates CDRs and receiving plurality of call records in global telecommunication network.

The SPnet is a personal computer for accessing the Web or internet. Brouckman et al.

discloses the transmitting of the converted plurality of call events records to the destination in

the world. Thus, the arguments are moot and claims 1-27 are remaining in the rejection

manner.

11. The Group and/or Art Unit location of your application in the PTO has changed. To aid in

correlating any papers for this application, all further correspondence regarding this

application should be directed to Group Art Unit 2684. Any inquiry concerning this

communication or earlier communications from the examiner should be directed to Charles

Chow whose telephone number is (703)-306-5615. If attempts to reach the examiner by

telephone are unsuccessful, the examiner's supervisor, Daniel Hunter, can be reached at

(703)-308-6732.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington D. C. 20231

Or Faxed to: (703)-872-9314 (for formal communications intended for entry) Or hand-

delivered to: Crystal Park ll, 2121 Crystal Drive, Arlington, VA, Sixth Floor, Receptionist.

For general inquiry or relating to the status of this application should be directed to the Group

Receptionist whose telephone number is (703)-306-0377.

Charles Chow

February 26, 2002.

SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600